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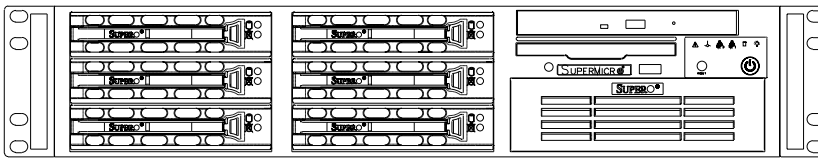
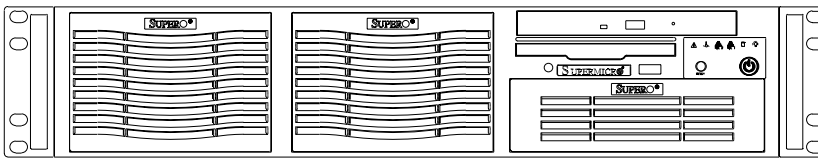


(SC822T/SC822S/SC822R)



(SC822i)

SC822 CHASSIS

USER'S GUIDE

1.0a

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Printed in the United States of America

Table of Contents

Chapter 1-Safety Information and Technical Specifications

1-1 Electrical Safety Guidelines

Warning: *To avoid electrical shock, check the power cords as follows:*

Checking the Power Cords

- Use the exact type of power cords as required.
- Be sure to use power cord(s) that came with safety certifications.
- The power cord(s) must be compliant with the AC voltage requirements in your region.
- The power cord plug cap must have an electrical current rating that is at least 125% of the electrical current rating of this product.
- The power cord plug cap that plugs into the AC receptacle on the power supply must be an IEC 320, sheet C13, type female connector.
- Be sure to disconnect the power supply before accessing the SC822 or its components.
- Plug the Power cord(s) into a socket that is properly grounded before turning on the power.

Warning: *Follow the guidelines below to avoid possible damages to the system or injury to yourself:*

General Electrical Safety Guidelines

- Be aware of the locations of the power switches on the chassis and in the room, so you can disconnect the power supply if an accident occurs.
- Take extra precautionary measures when working with high voltage components. It is not recommended to work alone.
- Before removing or installing main system components, be sure to disconnect the power first. Turn off the system before you disconnect the PS.
- Use only one hand when working with powered-on electrical equipment to avoid possible electrical shock.

- Use rubber mats specifically designed as electrical insulators when working with computer systems.
- The power supply or power cord must include a grounding plug and must be plugged into grounded outlets.
- Motherboard Battery: CAUTION -Make sure not to install the onboard battery upside down to avoid possible explosion. Make sure that the positive side should be facing up on the motherboard. This battery must be replaced only with the same or an equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.
- CD-ROM Laser: CAUTION - Do not open the enclosures of power supplies or CD ROM to avoid injury.

1-2 General Safety Guidelines

Warning: *Follow these rules to ensure general safety:*

Keep the area around the SC822 clean and free of clutter.

- To avoid injuries to the back, be sure to use your leg muscles, keep your back straight, and bend your knees, when lifting the system.
- After removing the components or chassis covers from the system, place them on a table for safeguard.
- Avoid wearing loose clothing to preventing it from coming into contact with
- Be sure to remove any jewelry or metal objects before working on the chassis to avoid short circuits should these objects come into contact with power circuits.
- After accessing the interior of the chassis, be sure to close the chassis with chassis covers and secure the chassis to the racks with screws.

1-3 ESD Safety Guidelines

Electric Static Discharge (ESD) can damage electronic components. To prevent damage to your system board, it is important to handle it very carefully. The following measures are generally sufficient to protect your equipment from ESD.

- Use a grounded wrist strap designed to prevent static discharge.
- Keep all components and printed circuit boards (PCBs) in their antistatic bags until ready for use.
- Touch a grounded metal object before removing the board from the antistatic bag.
- Do not let components or PCBs come into contact with your clothing, which may retain a charge even if you are wearing a wrist strap.
- Touch a grounded metal object before removing the board from the antistatic bag.
- Handle a board by its edges only; do not touch its components, peripheral chips, memory modules or contacts.
- When handling chips or modules, avoid touching their pins.
- Put the motherboard and peripherals back into their antistatic bags when not in use.
- For grounding purposes, make sure your computer chassis provides excellent conductivity between the power supply, the case, the mounting fasteners and the motherboard.

1-4 Operation Safety Guidelines

Warning: *For proper cooling, make sure to install all chassis covers before turning on the system. If this rule is not strictly followed, warranty may become void. Do not open the casing of a power supply. Power supplies can only be accessed and serviced by a qualified technician of the manufacturer.*

To avoid personal injury and property damage, please carefully follow all the safety steps listed below:

Before accessing the chassis:

1. Turn off all peripheral devices connected to the SC822.
2. Press the power button to power off the system.
3. Unplug all power cords from the system or the wall outlets.
4. Disconnect all the cables and label the cables for easy identification.
5. Use a grounded wrist strap designed to prevent static discharge when handling components.

Removing the chassis covers:

After completing the above steps, you can remove the covers and install components/peripheral devices into the chassis as described in Chapter 2.

1. Unlock and remove the screws and fasteners to remove the cover or components.
2. Save all the screws and fasteners for later use. (If necessary, label these screws or fasteners for easy identification.)
3. Follow the instruction given in Chapter 3 to remove the chassis covers.

Reinstalling the chassis covers:

To maintain proper system cooling and airflow, do not operate the system without installing all chassis covers back to the chassis. To reinstall the chassis covers, please follow the steps listed below:

1. Make sure that all components and devices are securely fastened on the chassis and there are no loose parts/screws inside the chassis.
2. Make sure that all cables are properly connected to the connectors and ports.
3. Use the original screws or fasteners to install the covers to the chassis.
4. Be sure to lock to the chassis or the system to prevent unauthorized access.
5. For proper cooling, enclose the chassis with covers before operating the system.

Before installing the chassis into a rack:

1. Make sure that the rack is securely anchored onto a unmovable surface or structure before installing the chassis into the rack.
2. Unplug the power cord(s) of the rack before installing the chassis into the rack.
3. Make sure that the system is adequately supported. Make sure that all the components are securely fastened to the chassis toprevent components falling off from the chassis.
4. Be sure to install an AC Power Disconnect for the entire rack assembly and this Power Disconnect must be clearly marked.
5. The rack assembly shall be properly grounded to avoid electric shock.
6. The rack assembly must provide sufficient airflow to the chassis for proper cooling.

1-5 Product Compliance Information

The SC822 CHASSIS is compliant with the following safety standards/ requirements:

Product Safety

*Canada/USA--UL60 950-CSA60 950
*European Union--EN 60 950
*International--IEC 60 950

Electromagnetic Compatibility (EMC)-Emissions

*European Union--EN55022: 1994
*International--CISPR 22
*USA--Title 47 CFR, Part 15

Electromagnetic Compatibility-Immunity

*European Union--EN55024: 1998
*International--CISPR 24

Power Line Harmonics/Voltage Flicker

*European Union--EN61000-3-2/EN61000-3-3
*International--IEC61000-3-2

1-6 Packing List and the SC822 Specifications

A. The SC822 Series chassis contains the following:

- One (1) 1.44" floppy drive
- One (1) slim CD-ROM drive (*For the SC822R, SC822T-R only)
- One (1) 5.25" drive bay
- One (1) I/O shield

- SCSI Accessories (*For the SC822R, SC822S only)
  One (1) SCSI backplane
  One (1) SCSI Ultra 320 Cable
  Six (6) SCSI drive carriers

- SATA Accessories (*For the SC822T only)
  One (1) SATA backplane
  One (1) SATA Activity LED cable
  Six (6) SATA cables
  Six (6) SATA drive carriers

- IDE Accessories (*For the SC822i only)
  Two (2) IDE drive carriers
  One (1) IDE cable

B. SC822 Specifications

For the SC822-IDE Models-(*822i-300LP/822i-400RC)

SC822-IDE-(*822i-300LP/822i-400RC)			
Component	**Part#**	**Qty**	**Notes**
IDE Drive Tray	CSE-PT18 (B)	2	
8 cm Hot -Swap Chassis Fan	Fan-044	4	
300W Power Supply	PWS-028	1	(*for 822i -300LP)
400W Power Supply	PWS-027	1	(*for 822i -400RC)
Floppy Drive	FPD-PNSC-02(01)	1	
Riser Card	CSE-RR2U-50	1	(*for 822i -400RC)
Rackmount Hardware	CSE-PT 25	1	

For the SC822-SCSI Models-(*822S-400LP/822R-400RC/822R-350RC/822R-400LP)

SC822-SCSI-(*822S-400LP/822R-400RC/822R-350RC/822R-400LP)			
Component	**Part#**	**Qty**	**Notes**
SCA Drive Tray	CSE-PT17 (B)	6	
8 cm Hot -Swap Chassis Fan	Fan-044	4	
350W Power Supply	PWS-030	2	(*for 822R-350RC)
400W Power Supply	PWS-027	1	(* for 822S-400LP)
400W Power Supply	PWS-037	2	(* for 822R-400RC 822R-400LP)
6-port SCSI Backplane	CSE-SCA-822	1	
SCSI Cable	CBL-033-U320	1	
Floppy Drive	FPD-PNSC-02(01)	1	
CD ROM	CDM-TEAC-024(B)	1	(*for Redundant Chassis)
Riser Card	CSE-RR2U-50	1	(*for Chassis w/Riser Cards)
Rackmount Hardware	CSE-PT-25	1	

For the SC822-SATA Models-(*822T-550LP/822T-R500RC)

SC822-SATA-(*822T-550LP/822T-R500RC)			
Component	**Part#**	**Qty**	**Notes**
SCA Drive Tray	CSE-PT17 (B)	6	
8 cm Hot -Swap Chassis Fan	Fan-044	4	
500W Power Supply	PWS-0049	2	*(*for 822T-R500RC)*
550W Power Supply	PWS-0047	1	*(* for 822T-550LP)*
6-port SATA Backplane	CSE-SATA-822	1	
SATA Cable	CBL-0044	6	
SATA Activity LED Cable	CBL-0077	1	
Floppy Drive	FPD-PNSC-02(01)	1	
CD ROM	CDM-TEAC-024(B)	1	*(*for 822T-R500RC)*
Riser Card	CSE-RR2U-50	1	*(*for 822T-R500RC)*
Rackmount Hardware	*CSE-PT-25*	*1*	

C. SC822 Power Supply Specifications

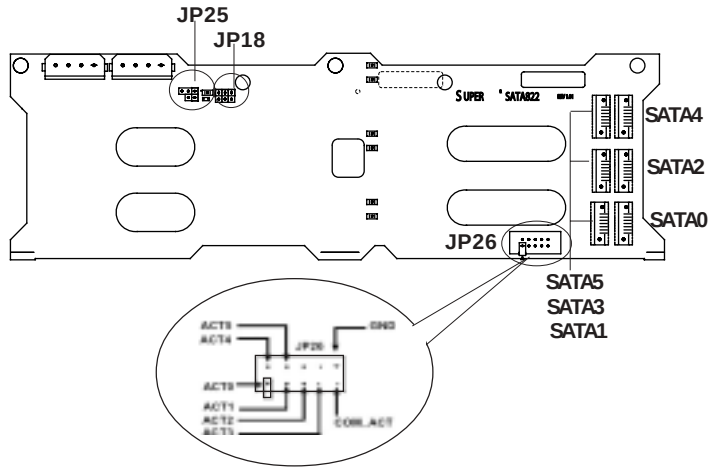
Power supply spec	300W	350W (module)	400W	400W (module)	500W	550W
Mfr. Model#	SP302-2C	SP352-2C	SP402-2C	SP402-2S	SP502-2S	SP552-2C
Mfr. Part#	PWS-0028	PWS-0030	PWS-0027	PWS-0037	PWS-0049	PWS-0047
Rated AC input voltage	100-240V AC	100-240V AC	100-240V AC	100-240V AC	100-240V AC	100-240V AC
Rated input frequency	50-60 Hz	47-63 Hz	47-63 Hz	50-60 Hz	50-60 Hz	50-60 Hz
Rated input current	6A (115V)	10A (115V)	7A (115V)	8A (115V)	10A (115V)	9A (115V)
	3A (230V)	5A (230V)	3.5A (230V)	4A (230V)	5A (230V)	3.5A (230V)
Rated output power	300W	350W	400W	400W	500W	550W
Maximum rated BTU	1580 BTUs/Hr	1840 BTUs/Hr	2185 BTUs/Hr	2185 BTUs/Hr	2630 BTUs/Hr	2910 BTUs/Hr
Nominal DC output						
+3.3V	20A	28A	28A	30A	21A	30A
+5V	30A	30A	33A	30A	30A	35A
+12V	15A	25A	25A	26A	39A	34A
-5V	0.3A	0.3A	0.8A	0.5A	N/A	0.8A
-12V	0.8A	0.8A	1A	1A	1A	1A
+5Vsb	2A	2A	2A	2A	2A	2A

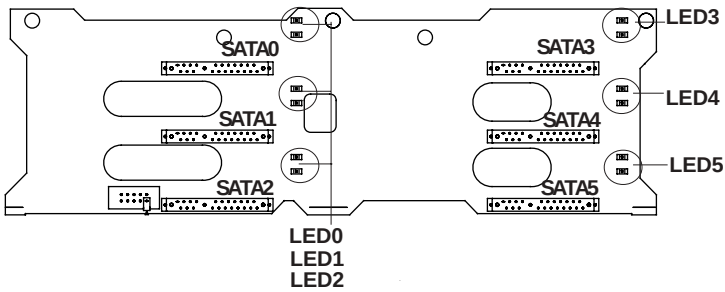
D. The Serial ATA Back Panel (*SC822T Only)

D-1 Jumper Settings and Pin Definitions

Jumpers	Default Settings	Notes
JP18	Open	Buzzer Reset (*Note Below)
JP25	1-2	Overheat Temperature at 50^{0}C
JP26	Open	Common Act In and Act#0-#5 In

D-2 Jumper Setting Locations



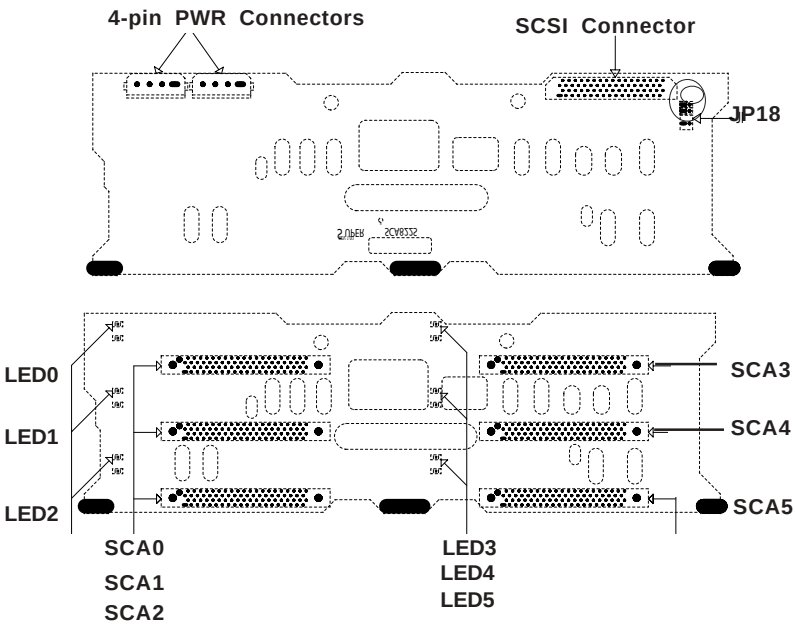


E. The SCSI Back Panel (*SC822R/SC822S Only)

E-1 Jumper Settings and Pin Definitions

Jumpers	Default Settings	Notes
JP18	Closed	Buzzer Unable/Disable (*Open: Disable, Closed: Enable)

E-2 Jumper Setting Locations



Chapter 2: Chassis Description and Installation Instructions

2-1 Chassis Description

A. Contents of the Accessory Kit:

The following items are included in the Accessory Kit:

M/B Standoffs

A M5 x 6-32 x 6.5L

B M5 x 6-32 x 7.7L

Screws for M/B

C Pan head with lock 6-32 x 4.5 mm

Screws for HDD

D Flat head 6-32 x 5mm

Screws for Drives

E Pan head 6-32 x 5m

F Round head M2 x 3mm

G Round head M3 x 5 mm

H Pan head M3 x 5mm

RAIL

I Round head M4 x 4 mm

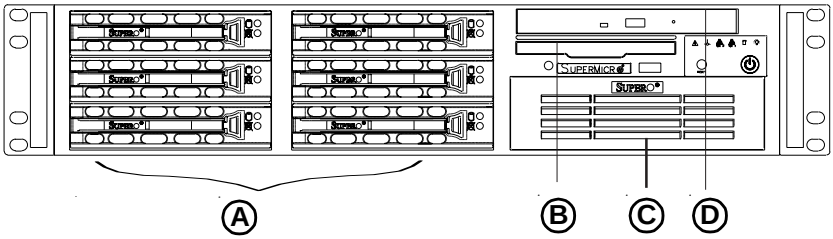
J Flat head M5 x 12 mm

K Washer for M5

B. Chassis Front View and the Front Control Panel

Chassis Front Panel

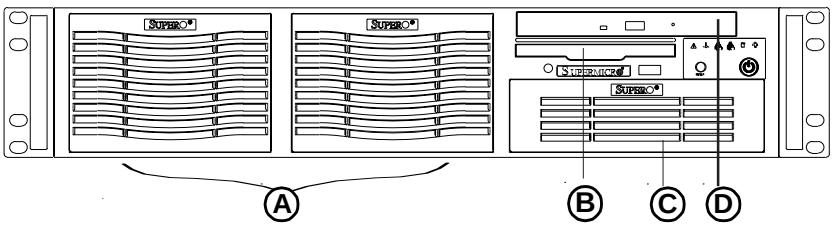
SC822T/SC822S/SC822R Series



Front Panel I/O Device Definitions (* for the SC822T/SC822S/SC822R)

A. SCA Drive Trays(6)
B. Floppy Disk(1)
C. 5.25" Drive Bay(1)
D. CD ROM(1)(*822R/822T-R)

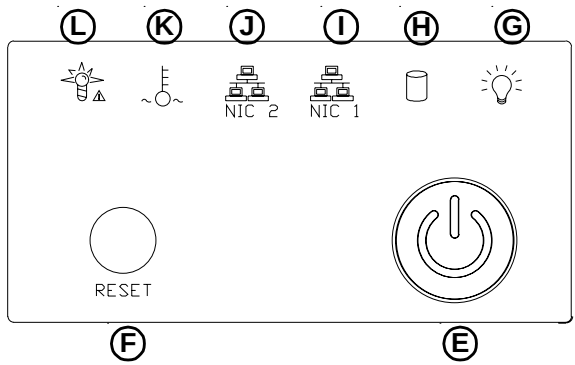
SC822i Series



Front Panel I/O Device Definitions (* for the SC822i)

A. IDE Drive Trays(2)
B. Floppy Disk(1)
C. 5.25" Drive Bay(1)
D. CD ROM(*Optional)

LED Panel



LED and Button Definitions

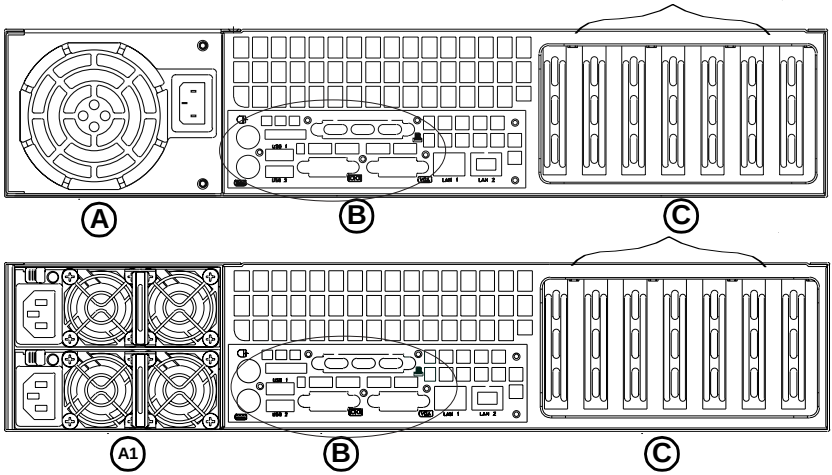
E. Power Button
F. Reset Button
G. Power Indicator
H.HDD Activity
I. LAN1
J. LAN2
K. Overheat
L. System Alert/Power Failure
(*for Redundant PS only)

LED Button Descriptions

LED Button	Color	Condition	Description
Power	Green	On	System On
		Off	System Off
HDD	Amber	Blink	HDD Activity
		Off	No Activity
LAN1 & LAN2	Green	On	Linked
		Blink	LAN Activity
		Off	Disconnected
Overheat	Red	On	System Overheat
		Off	System Normal
System Alert/ Power Failure	Red	On	1 or more PWR modules failure
		Off	System Normal

C. Chassis Rear View and the Back Panel

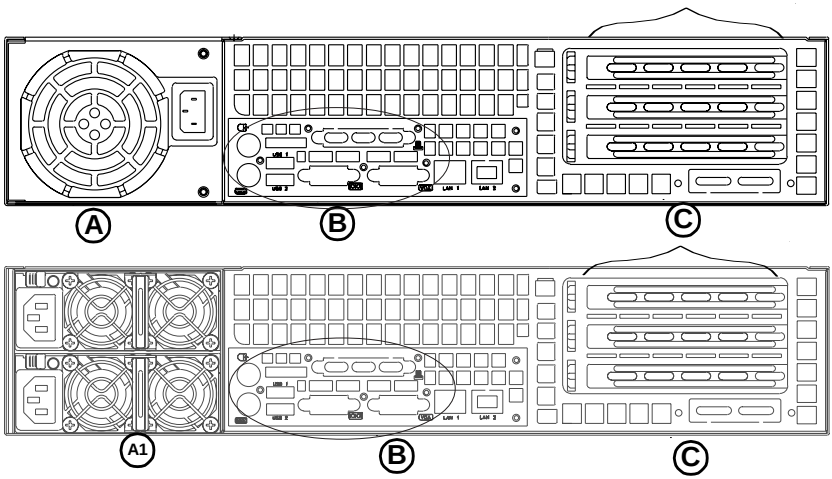
SC822 Chassis Rear View (*SC822T/822S/822R/822i-LP Models)



Back Panel Devices (*P/N: CSE-PT21)

A. Power Supply A1. Redundant Power Supply
B. Back Panel I/O Ports
C. Low Profile Expansion Slots(7)

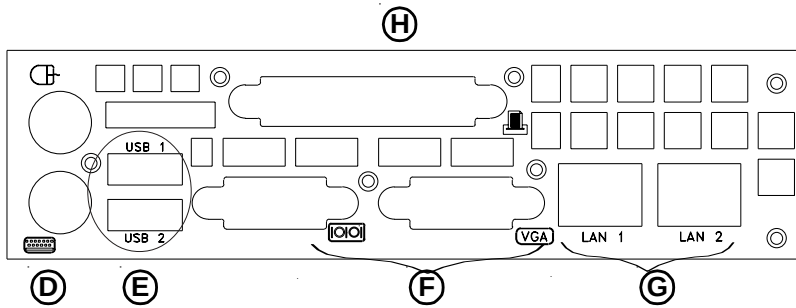
SC822 Chassis Rear View (*SC822T/822R/822i-RC Models)



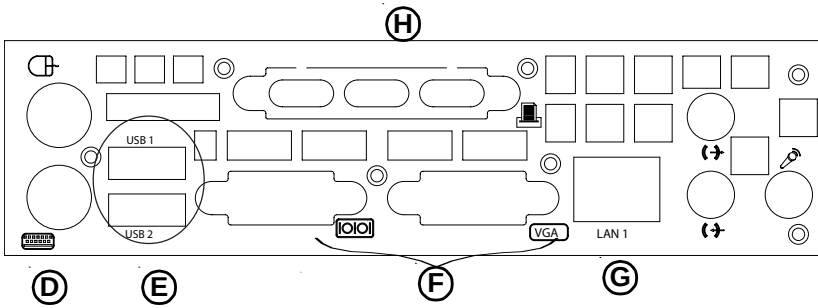
Back Panel Devices (*P/N: CSE-PT22)

A. Power Supply A1. Redundant Power Supply
B. Back Panel I/O Ports
C. Full Size Riser-card Slots(3)

***I/O Back Panel (*installed on the back panel-See Page 2-4)**



***I/O Back Panel (*included in the Accessories-See Page 1-9)**



Back Panel I/O Port Definitions

D. Keyboard & Mouse
E. USB Ports
F. COM/Video Ports
G. LAN1 (& LAN2)
H. Parallel Port

(*Note: The actual I/O Configuration of your system might be different from the one shown above.)

Power Module LED Descriptions (*For Redundant Power Supply only)

Power Module LED	Color Condition	Description
	Green	Power Supply DC On
	Amber	Power Supply Standby
	Off	No AC Power to the system

2-2 Chassis Installation

A. Important Safety Guidelines

This product shall only be accessed, assembled and serviced by technically qualified personnel or technicians.

To avoid personal injury and property damage, please read all the information provided in Chapter 1, and carefully follow all the Safety Guidelines listed before accessing or servicing the SC822 or its components. For your convenience, some Safety Steps are also listed below.

Safety Steps

Before accessing the chassis:

1. Turn off all peripheral devices and turn off the power supply connected to the SC822.
2. Unplug all power cords from the system or the wall outlets.
3. Disconnect all the cables and label the cables for easy identification.
4. Use a grounded wrist strap designed to prevent static discharge when handling components.

Removing the chassis covers:

After completing the above steps, you can remove the chassis covers and install components and devices into the chassis as described in this chapter.

1. Press the tabs or the screws to loosen and remove the cover or the components from the chassis.
2. Save all the screws and fasteners for later use. (If necessary, label these screws or fasteners for easy identification.)
3. Follow the instructions given in this chapter to remove the chassis covers.

B. Tools needed

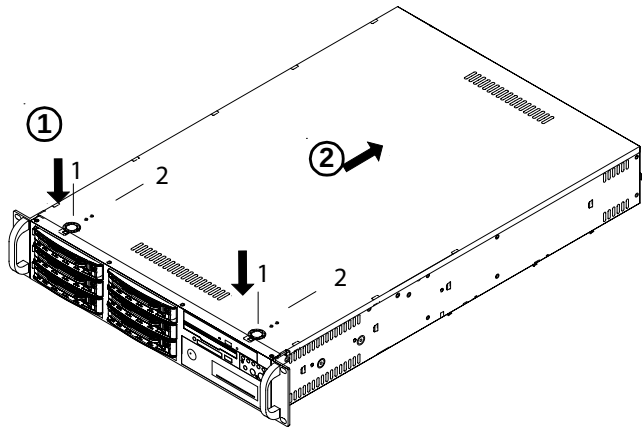
1. Phillips Screw Driver
2. Antistatic Strap

C. Removing the Top Cover of the SC822 Chassis

Before installing any components, replacing chassis fans or accessing the motherboard, you will first need to remove the top cover.

Procedures

1. Press the release tabs to release the cover from its locking position.



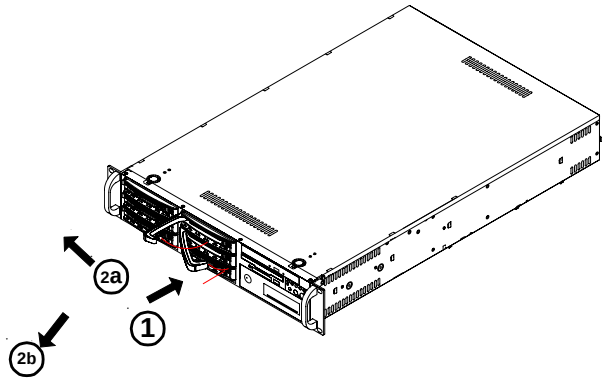
2. Once the top cover is released from its locking position, push the cover toward the rear side and slide it out from the chassis.

D1. Accessing the SCSI (or SATA) Drive Tray and Installing a Hard Disk(*For the SC822S/822T/822R series)

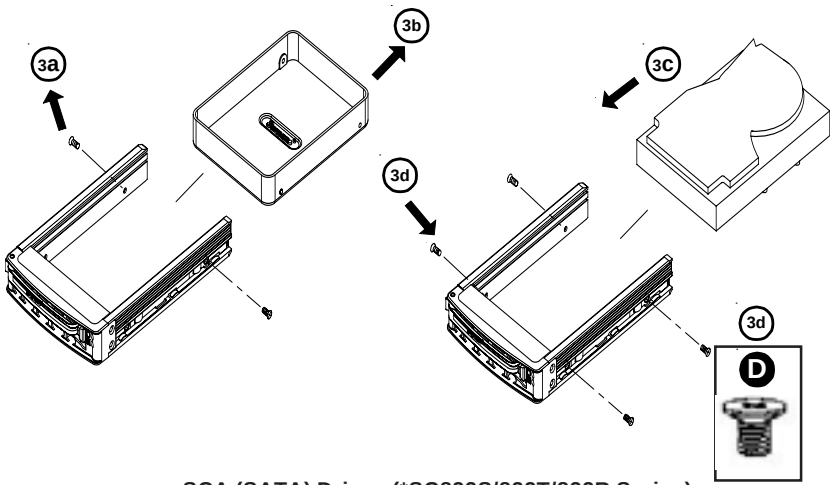
To install the SCA(SATA) drive into the chassis, you need to first remove the SCA(SATA) drive tray from the chassis.

Procedures

1. Press the release tab located on the drive tray door to release the drive tray from its locking position as shown below.
2. Pull the drive tray door upward and then pull the drive tray out from the chassis.



3. Remove the screws to loosen the drive tray. Once loosened, pull it out from its housing. Then, mount a hard drive in the drive tray and secure it with screws as shown below.



SCA (SATA) Drives (*SC822S/822T/822R Series)

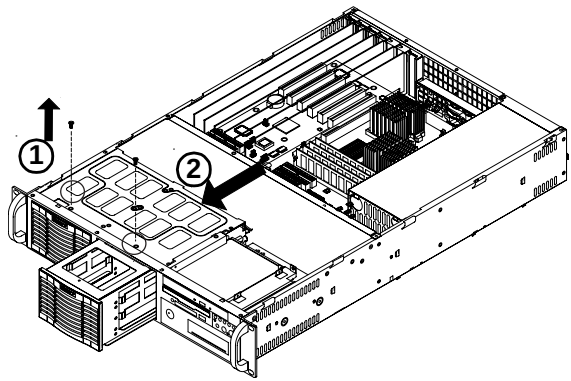
D2. Accessing the IDE Drive Tray and Installing a Hard Disk (*For the SC822i Series)

To install the IDE drive into the chassis, you, first, need to remove the top cover and, then, remove the IDE drive tray from the chassis.

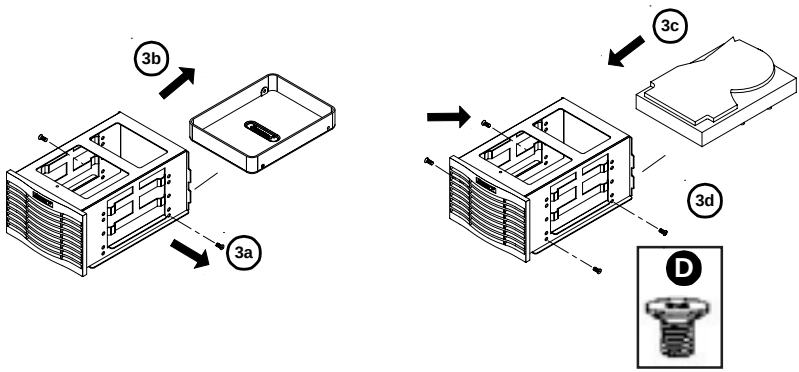
Procedures

1. Remove the screws from the top of the IDE drive as shown below.

2. Once the top cover and the screws are removed, press on the back side of the IDE drive tray and push it out from the chassis.



3. Remove the screws to loosen the drive tray. Once loosened, pull it out from its housing. Then, mount a hard drive in the drive tray and secure it with screws as shown below.

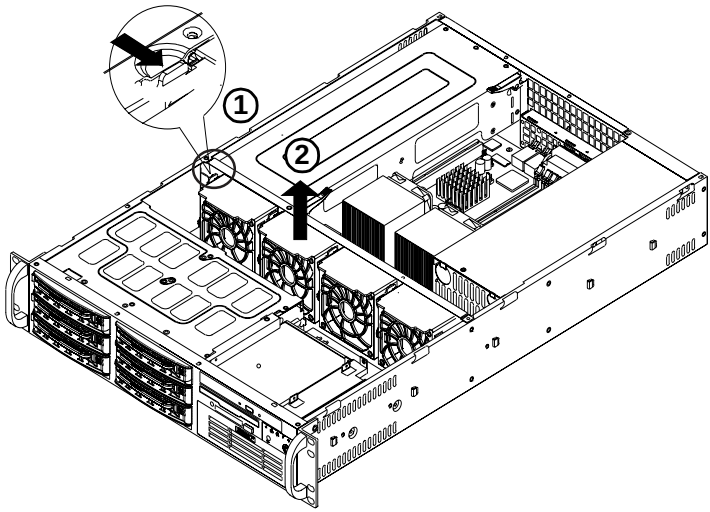


IDE Drives(*SC822i Series)

E. Accessing the Front Chassis Fans

Procedures

1. Press the release tab located on the left side of the front chassis fan (when facing the front side of the fan) to release the chassis fan from its locking position as shown in the picture below.



2. Once the front chassis fan is loosened, you can pull it out.

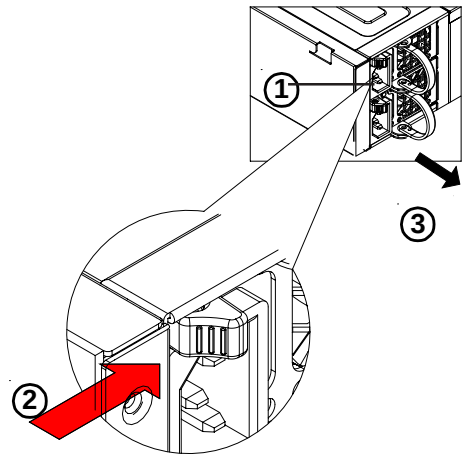
F. Accessing the Redundant Power Supply (*For the SC822R/ 822T-R500 models)

(Caution: Unplug the Power Cord before removing the Power Supply!!)

Procedures

1. Locate the release tab on the left side of the power supply.

2. Push the release tab to the right to release the power supply from its locking position as shown below.



3. Once the power supply module is released from its locking position, remove it from the chassis.

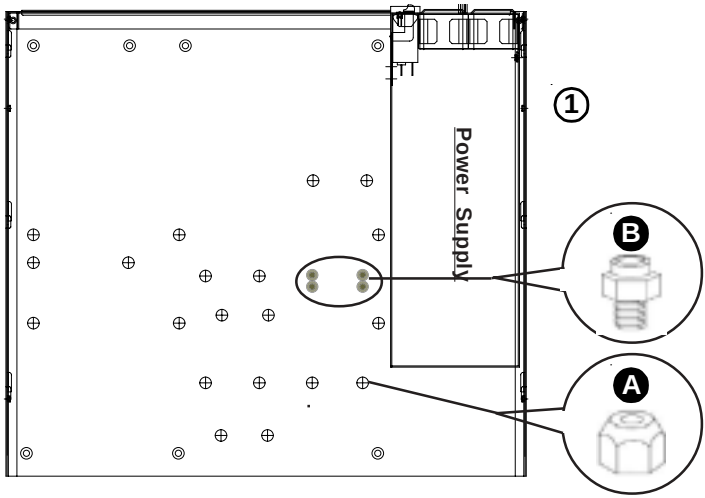
Warning: *Do not open the casing of a power supply. Power supplies can only be accessed and serviced by a qualified technician from the manufacturer.*

G. Installing the Motherboard

Be sure to disconnect the power supply before accessing or installing the motherboard into the chassis. To install the motherboard to the chassis, you will need to, first, install the correct type of standoffs at the proper locations before installing the motherboard into the chassis. (Refer to Chapter 1 for Safety Guidelines.)

Procedures

1. Lay the chassis on a flat surface. Locate the mounting holes on the motherboard and locate the corresponding mounting holes on the chassis.



2.On the chassis, install standoffs in the mounting holes that are corresponding to the mounting holes on the motherboard.

3. Lay the motherboard on the standoffs and secure it to the chassis with the correct types of screws at proper locations.

4. Secure the CPU(s) and heatsink(s) to the motherboard and the chassis as needed.

(*Notes: Please install type B standoffs on holes marked as , and install type A standoffs on holes marked as as shown above.)

Warning: *For proper cooling, please make sure that all the chassis covers are installed before you operate the system. Out of warranty damage can occur if this rule is not strictly followed.*

H. Installing Chassis Rails

Please make sure that the chassis covers and chassis rails are installed on the chassis before you install the chassis into the rack.

To avoid personal injury and property damage, please carefully follow all the safety steps listed below.

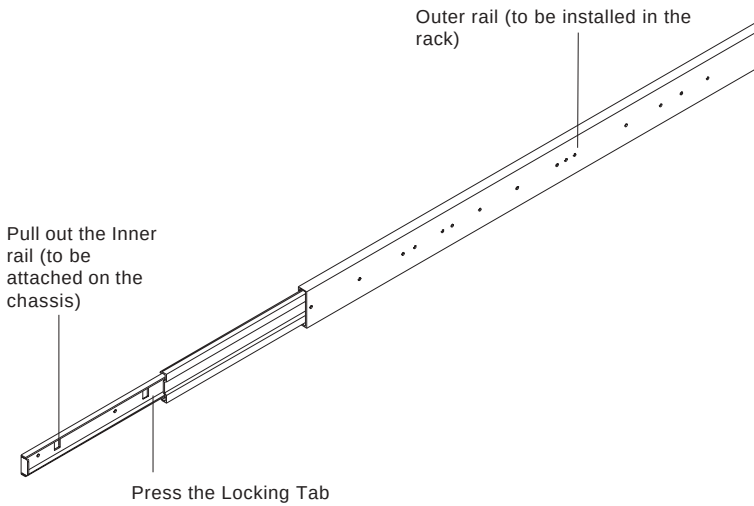
Before installing the Chassis rails:

1. Enclose the chassis with chassis covers.
2. Unplug the AC power cord(s).
3. Remove all external devices and connectors.

Procedures to Install Chassis Rails

1. Included in the shipping package are a pair of rail assemblies. In each rail assembly, locate the inner rail and the outer rail.

2. Press the locking tab to release the inner rail from its locking position and pull out the inner rail from the rail assembly. (*The inner rails are to be attached to the chassis and the outer rails are to be installed in the rack.)

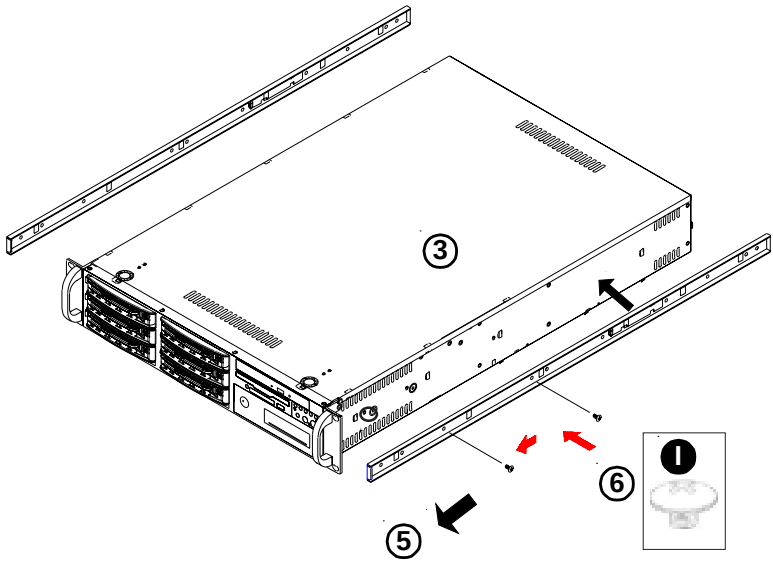


3. Locate the five rail hooks on each side of the chassis and locate the five corresponding holes on each of the inner rail.

4. Align the five holes on the rail against the corresponding hooks on the chassis. Once aligned, attach the inner rail to the chassis by pressing the holes into the corresponding hooks.

5. Once the rail is placed on the chassis, pull the rail forward until you hear the "click" sound.

6. Secure the rail to the chassis with a Type I screw (Refer to Page 2-1 for the Type I screw.) Repeat the above steps to install other rail on the chassis.



I. Rack Installation

After you have installed the inner rails on the chassis, you are ready to install the outer rails of rail assemblies to the rack.

(* The rails are designed to fit in the racks with the depth of 28" to 33".)

Procedures

1. In the package, locate a pair of front (-short) and rear (-long) brackets. Please note that the brackets are marked with Up/Front Arrows (-front) and Up/Rear arrows (-rear).

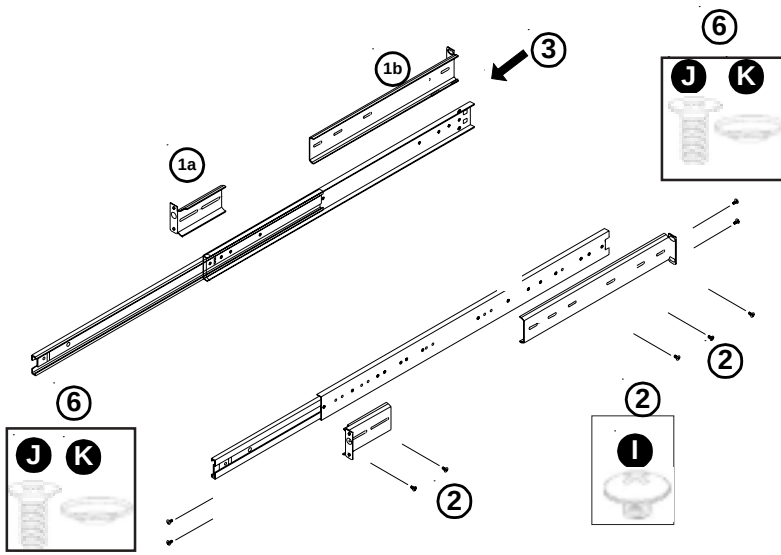
2. Secure the front (-short) bracket (marked with the Up/Front arrows) to the outer rail with two Type I screws.

3. Attach the rear (-long) bracket to the rail unit by sliding the rear rail into the rail unit. Insert the complete rail assembly into the chassis.

4. Measure the depth of your rack and adjust the length of the rail assembly accordingly.

5. Repeat the same steps to install the other rail assembly into the chassis.

6. Secure both outer rail assemblies to the rack with Type J screws and Type K washers.



7. Slide the SC822 chassis into the rack **until you hear the "click" sound**.

(The SC822 may not slide into the rack smoothly or easily when installed the first time. However, some adjustment to the slide assemblies might be needed for easy installation.)

8. You will need to release the safety tabs on both sides of the chassis in order to completely remove the chassis out of the rack.